42. (Amended) A method for generating a culture that is purified or enriched in neural progenitor cells, comprising:

(i) introducing into a pluripotential cell a selectable marker that is differentially expressed in neural progenitor cells compared with its expression in other cells, wherein neural progenitor cells constitute a sub-set of the cells obtainable from the pluripotential cell;

(ii) culturing the pluripotential cell *in vitro* to induce differentiation of the pluripotential cell into a neural progenitor cell or into a mixture of cells including neural progenitor cells, or to induce preferential survival, in a mixed culture of cells, of neural progenitor cells; and

(iii) selecting for neural progenitor cells according to differential expression of the selectable marker introduced in step (i).

44. (Amended) A method according to Claim 42 wherein the pluripotential cell is selected from embryonic stem (ES) cells, embryonic germ (EG) cells, embryonic carcinoma (EC) cells, a primary culture of fetal cells, a primary culture of post-natal cells, and a primary culture of adult cells.

45. (Amended) A method according to Claim 42 comprising genetically modifying pluripotential cells to delete, mutate, substitute or add genes in order (i) to assay gene function in neural progenitor, and/or (ii) to render selected cells more suitable for transplantation.

46. (Amended) A method according to Claim 42 further comprising:

(iv) introducing into the pluripotential cell a second selectable marker that is differentially expressed in cells of a selected sub-lineage compared with its expression

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in other cells, wherein cells of the selected sub-lineage are formed by differentiation of neural progenitor cells; and

(v) when a culture of neural progenitor cells has been obtained, allowing or inducing differentiation of the cells and selecting for cells that express the second selectable marker.

47. (Twice Amended) A method according to Claim 42 wherein the selectable marker is introduced into the pluripotential cell by targeted integration or random gene trap integration so as to be operatively coupled to a gene that is differentially expressed in neural progenitor cells.

48. (Twice Amended) A method according to Claim 42 wherein the selectable marker is introduced into the pluripotential cell via random integration of a transgene in which the selectable marker is operatively coupled to a gene that is differentially expressed in neural progenitor cells.

49. (Twice Amended) A method according to Claim 42 wherein the pluripotential cell is an ES, EG, or EC cell and the method comprises forming an embryoid body, or otherwise inducing differentiation of the cells.

53. (Amended) A method according to Claim 42 wherein the selectable marker is expressed in cells that express a Sox gene.

REMARKS

Upon entry of this Amendment, claims 42, 44-51, 53, 54, 58, 64, and 65 are pending in this application. Applicants have canceled claims 43, 52, 55-57, and 59-63 without prejudice to their right to prosecute the subject matter of these claims in a divisional application. Applicants have amended the claims to reflect the election made in response to the Office Action dated August 16, 2001. Accordingly, the claims now

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